

## SAR-2309-08-S2

### WR-08 Pyramidal Horn Antenna, 23 dBi Gain

**SAR-2309-08-S2** is an F-band pyramidal horn antenna that operates from 90 to 140 GHz. The antenna offers 23 dBi nominal gain and a typical half power beamwidth of 11 degrees on the E-plane and 12 degrees on the H-plane. The antenna supports linear polarized waveforms. The input of this antenna is a WR-08 waveguide with UG-387/U-M flange.



#### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	90 GHz		140 GHz
Gain		23 dBi	
Polarization		Linear	
3 dB Beamwidth, E-Plane		11°	
3 dB Beamwidth, H-Plane		12°	
Sidelobes, E-Plane		-14 dB	
Sidelobes, H-Plane		-30 dB	
Return Loss		23 dB	
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

#### Mechanical Specifications:

Item	Specification
Antenna Port	WR-08 Waveguide
Flange Type	UG-387/U-M Flange
Material	Brass
Finish	Gold Plated
Weight	0.7 Oz
Size	1.68" (L) X 0.74" (W) X 0.59"(H)
Outline	AR-F2

#### ECCN

EAR99

#### FEATURES

- Rectangular Waveguide Interface
- Precisely Machined and Gold Plated
- Linear Polarization
- High Return Loss

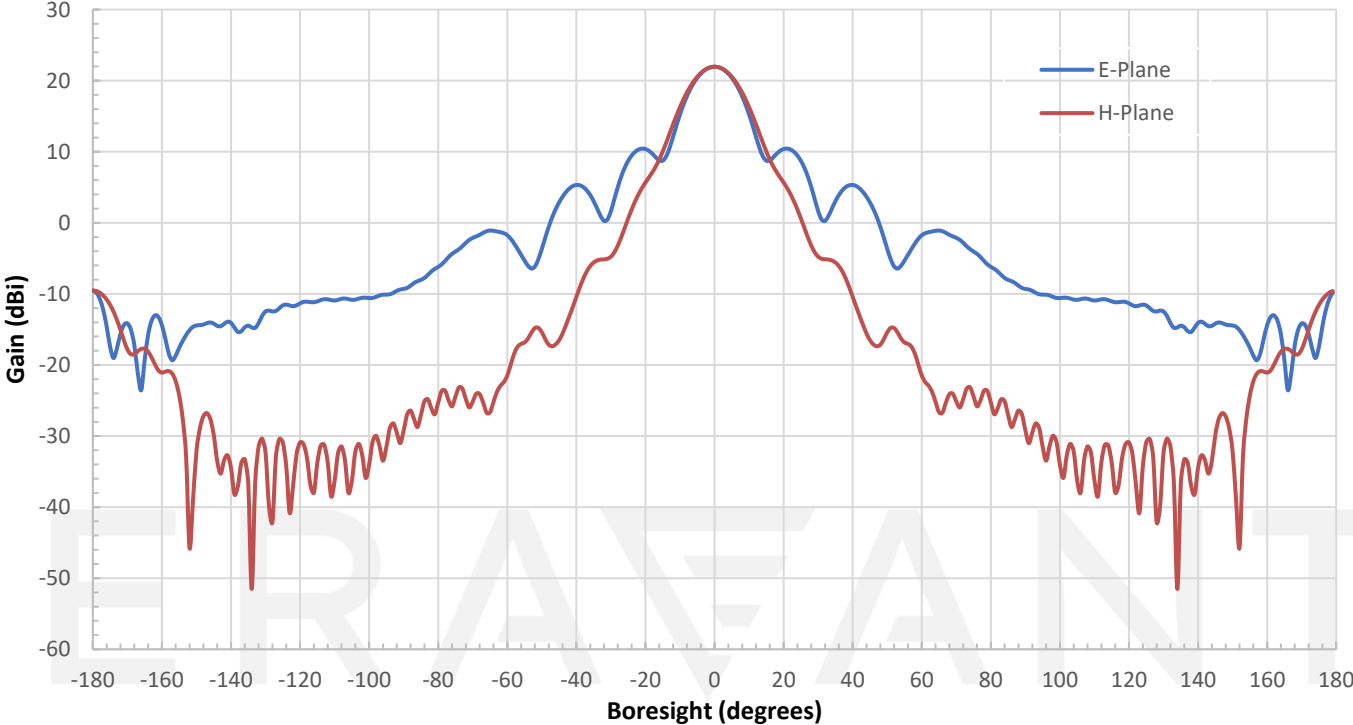
#### APPLICATIONS

- Antenna Ranges
- Antenna Gain Measurements
- System Setups

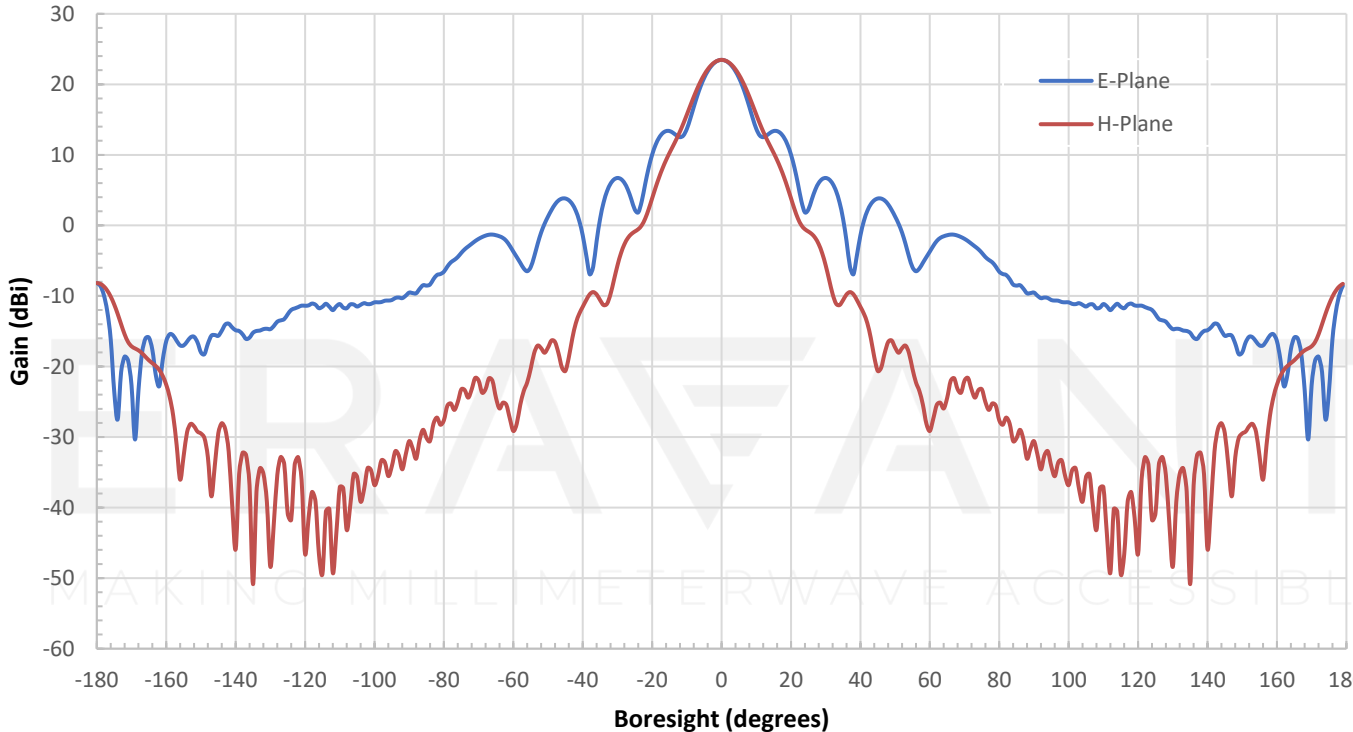
#### SUPPLEMENTAL DETAILS



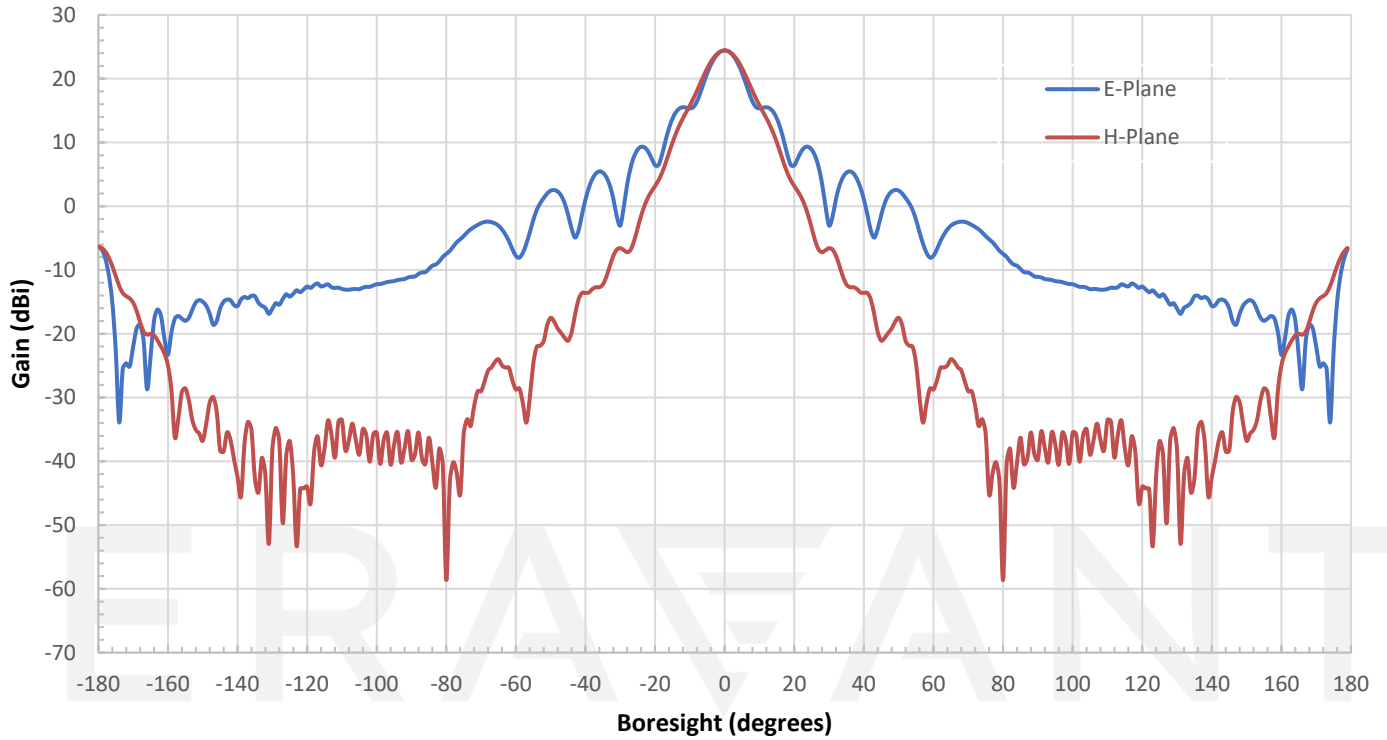
Simulated Antenna Patterns @ 90 GHz



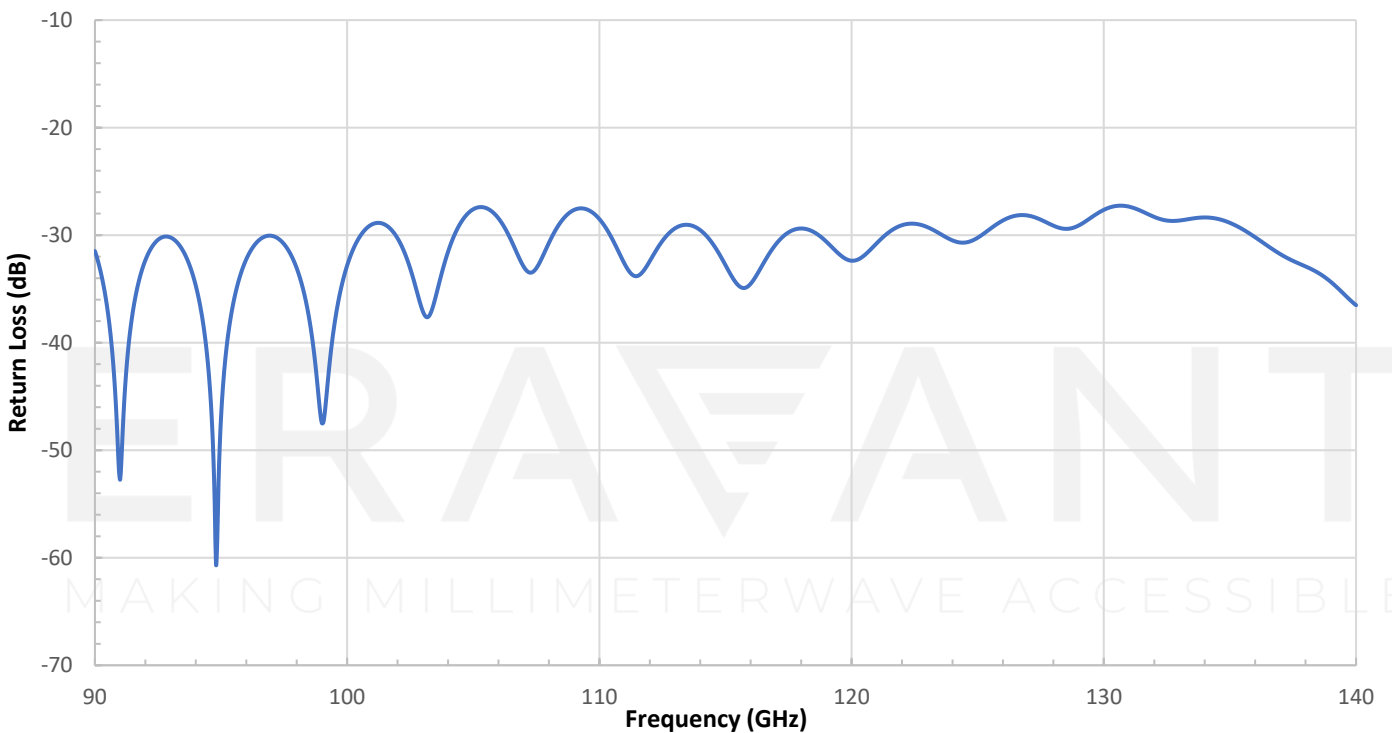
Simulated Antenna Patterns @ 115 GHz



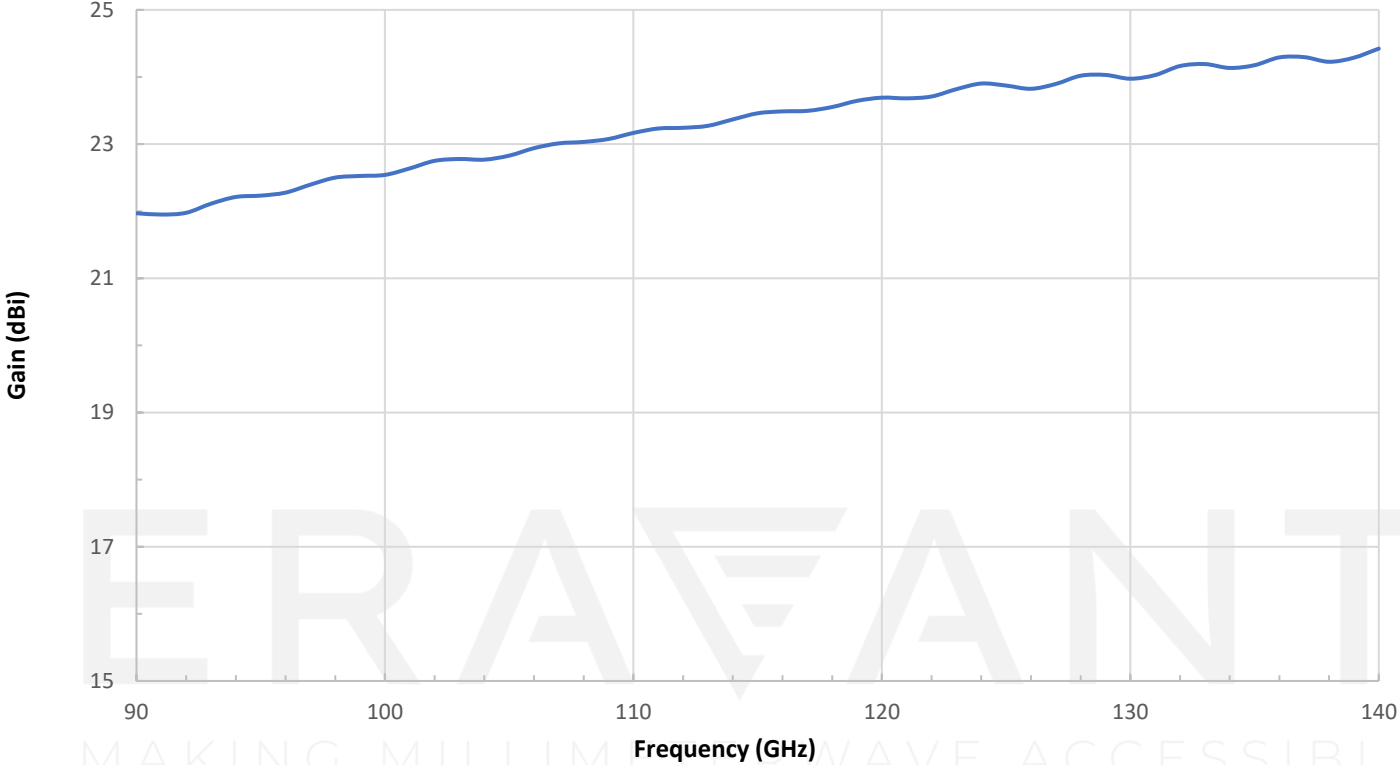
### Simulated Antenna Patterns @ 140 GHz



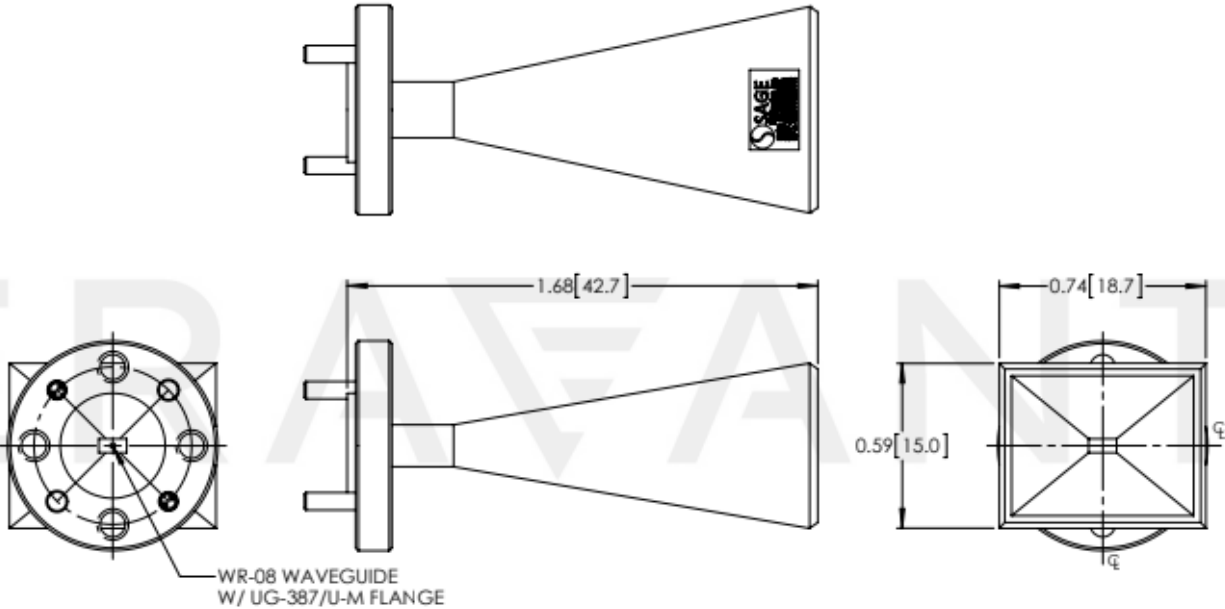
### Simulated Return Loss vs. Frequency



### Simulated Gain vs. Frequency



**Mechanical Outline:** Unless otherwise specified, all dimensions are in inches [millimeters]



**NOTE:**

- This antenna is a mature product. The reasons for only providing simulated data can be found in the following blog [here](#).
- Eravant reserves the right to change the information presented without notice.

**CAUTION:**

- If a waveguide is present, any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- Any foreign objects in the antenna will cause performance degradation and possible device damage.

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